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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/613,676 | 07/03/2003 | Hubert Remmlinger | ZAHFRI P520US | 7283 |
| 20210 | 7590 | 06/16/2004 | EXAMINER | |
| DAVIS & BUJOLD, P.L.L.C. FOURTH FLOOR 500 N. COMMERCIAL STREET MANCHESTER, NH 03101-1151 | | | LARKIN, DANIEL SEAN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2856 | |

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/613,676 | Applicant(s) REMMLINGER ET AL. | |
| | Examiner Daniel S. Larkin | Art Unit 2856 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11, 14-16, 18 and 21 is/are rejected.
- 7) ☒ Claim(s) 12, 13, 17, 19, and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 July 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The amendment filed 03 July 2003 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: The connection of a display (12), a computer screen, an indicator, a warning light, etc. to the electronic unit 8 to indicate to the operator of the machine or the transmission that servicing of the machine or transmission is desired or necessary. Additionally, the addition of the "display 12" to the drawing figure is not supported by the original disclosure. Applicant's foreign priority document fails to indicate that a display 12 is utilized in the invention.

Applicants are required to cancel the new matter in the reply to this Office Action.

Claim Objections

3. Claims 20 and 21 are objected to because of the following informalities:

Re claim 20, claim line 3: The "comma" after the term "data" should be corrected with a -- colon --.

Re claim 20, claim line 7: The phrase "the element" lacks antecedent basis.

Re claim 21, claim lines 9 and 10: The phrase "the machine" lacks antecedent basis. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 11 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by US 6,435,013 (Rodriguez et al.).

With respect to the limitations of claim 11, the reference to Rodriguez discloses a ferromagnetic particle sensor (10) for detecting the quantity of wear metals in engine oil. The sensor (10) is provided with two electromagnets (40, 42) each provided with a coil (50, 58). The sensor generates an output signal indicative of the amount of wear metals, which in turn is indicative of the condition of the machine.

With respect to the limitations of claim 14, the reference discloses that as the electromagnets (40, 42) are energized ferromagnetic particles are attracted to the coil to be detected and accumulated, col. 4, lines 29-45.

6. Claim 21 is rejected under 35 U.S.C. 102(a) as being anticipated by DE 10058844 (Remmlinger et al.).

With respect to the limitations of claim 21, the reference to Remmlinger et al. discloses an inductive measurement system for measuring the concentration of ferritic wear particles within a gear transmission, whereby a soft magnetic core (4) is located in a lower region of an oil carrying channel (1) with a coil wound around the core. An output signal is generated which is indicative of a condition of the transmission. Although not expressly shown, some indicator means is inherent in view that the output signal must inform someone of the gear oil condition, otherwise the sensor would serve no purpose.

7. Claims 11, 14-16, 18, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,219,805 (Magee et al.).

With respect to the limitations of claim 1, the reference to Magee et al. discloses a lubricating oil debris monitoring system which detects accumulation of the debris particles deposited within an engine oil, by a measurement system having a coil (14); and an output signal is generated from the measurement system which is indicative of condition of the machine.

With respect to the limitations of claim 14, the reference discloses that the coil (14) acts as a capturing magnet by attracting the particles to the surface (17) of a magnetic steel shroud (15) surrounding the device such that the particles collect on the surface (17).

With respect to the limitations of claim 15, the reference discloses that accumulation of the particles on the surface (17) causes a change in the inductance of the device, and this change is representative of the capture and mass of the particles. An output signal from the device is submitted to signal conditioning means (30) to evaluate the output signals which are a function of the mass of the particles.

With respect to the limitations of claim 16, the reference discloses that an alternative embodiment can be used, as shown in Figure 2b, which changes the permanent magnet (12) shown in Figure 2a with a soft iron core which in turn is energized with a power coil (15). This embodiment presents a self-cleaning advantage of some applications in that debris particles tend to fall off collection surface (17) when system power is off.

With respect to the limitations of claim 18, the reference to Magee et al. discloses a device for diagnosis of a machine by analyzing oil flowing within the machine comprising a coil core located in a region of an oil sump with a coil wound around the coil core; and a device for providing measurement conditions of the machine coupled to the core for receiving an inductance signal influenced by the accumulation of wear particles adjacent the coil, the wear particles accumulate on a surface and influence the inductance of the coil, and this change is representative of the capture and mass of the

particles; and an indicator/display means for providing an audio/visual output of the measurement signals to indicate corrective action.

With respect to the limitations of claim 21, the reference to Magee et al. discloses a method of diagnosing a transmission/rotor gear box by detecting debris particles which are deposited within oil flowing through the gear box with a measurement system having a coil (14); generating an output signal from the measurement system which is indicative of a condition of the fluid within the rotor gear box; and sending the output signal to an indicator/display means to indicate that servicing of the rotor gear box is required.

Allowable Subject Matter

8. The following is a statement of reasons for the indication of allowable subject matter:

Prior art was not relied upon to reject claims 12, 13, 17, 19, and 20 because the prior art fails to teach and/or make obvious the limitations presented in the above cited claims in combination with all of the limitations of base claims 11 or 18.


9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Larkin whose telephone number is 571-272-2198. The examiner can normally be reached on 8:00 AM - 5:00 PM Mon-Fri.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Daniel Larkin
AU 2856
14 June 2004



DANIEL S. LARKIN
PRIMARY EXAMINER